

ABSTRACT

A method for producing a carbonic ester, comprising: (1) performing a reaction between an organometal compound mixture and carbon dioxide, the organometal compound mixture comprising a reactive organometal compound and an unregenerable unreactive compound derived from the reactive organometal compound, to thereby obtain a reaction mixture containing a carbonic ester, the unregenerable unreactive compound, and a regenerable metamorphic organometal compound derived from the reactive organometal compound, (2) separating the reaction mixture into a first portion containing the carbonic ester and the unregenerable unreactive compound, and a second portion containing the regenerable metamorphic organometal compound, and (3) reacting the second portion of the reaction mixture with an alcohol to form an organometal compound mixture and water and removing the water from the organometal compound mixture, the organometal compound mixture comprising a reactive organometal compound and an unregenerable unreactive compound derived from the reactive organometal compound.